

CLAIMS

1. An electromedical implant for intracardial coronary therapy comprising an implant housing in which functional component parts of the implant, namely a circuit, a battery and the like, are disposed, characterized in that the battery (10) has a flat side (10.2), an underside (10.3) and a peripherally extending narrow side (10.1) and the battery (10) is arranged with its underside (10.3) on an internal base surface (18.1) of the implant housing (18) and the circuit (22) is arranged in adjacent relationship with a flat side (10.2) of the battery (10).

2. An electromedical implant as set forth in claim 1 characterized in that the circuit (22) includes a component carrier (26) with equipment set (electronic components (24)) and an underside (22.1) of the component carrier (26) and the circuit (22) is arranged in adjacent relationship with the flat side (10.2) of the battery (10).

3. An electromedical implant as set forth in claim 2 characterized in that the circuit (22) is fixed to the flat side (10.2) of the battery (10).

4. An electromedical implant as set forth in claim 3 characterized in that provided between the flat side (10.2) of the battery (10) and the underside (22.1) of the circuit (22) are structures (34) which compensate for discharge-induced swelling of the battery (10).

5. An electromedical implant as set forth in claim 4 characterized in that the structures (34) include free spaces between the battery (10) and the circuit (22).

6. An electromedical implant as set forth in claim 4 characterized in that the structures (34) include joining elements (36) between the battery (10) and the circuit (22), which elements permit a relative movement of the circuit (22) with respect to the battery (10).

7. An electromedical implant as set forth in claim 1 characterized in that the circuit (22) includes a component carrier (26) with equipment set (electronic components (24)) and an underside (22.1) of the component carrier (26) and the circuit (22) is arranged in adjacent relationship with an inward side (30.1) of an upper half-shell portion (30) of the implant housing (18).

8. An electromedical implant as set forth in claim 7 characterized in that the battery (10) does not fill the entire internal base surface (18.1) of the implant housing (18) but there are provided small free spaces (20) and the circuit (22) and the battery (10) are arranged relative to each other in such a way that electronic components (24) of great structural height project into those free spaces (20) after mounting of the component parts.

9. An electromedical implant as set forth in claim 1 characterized in that flat side (10.2) of the battery (10) and the circuit (22) have a heightwise profile which is matched to each other.

10. An electromedical implant as set forth in claim 9 characterized in that the circuit (22) in its contour follows the heightwise profile of the battery (10) and the electronic components (24) of the circuit (22) are so arranged that an overall height of the two component parts which are stacked in mutually superposed relationship is minimized.

11. An electromedical implant as set forth in claim 1, claim 2, claim 7 or claim 9 characterized in that there is provided a mounting element (32) which accommodates the circuit (22).

12. An electromedical implant as set forth in one or more of claims 1 through 11 characterized in that the further component part or all functional component parts disposed in the implant housing (18) are stacked one upon the other starting from the internal base surface of the implant housing (18).

13. An electromedical implant as set forth in one or more of claims 2 through 12 characterized in that the equipment set of the circuit (22) is of the smallest possible structural height.

14. An electromedical implant as set forth in one or more of claims 1 through 13 characterized in that the implant housing (18) comprises two half-shell portions (16, 30) and one of the half-shell portions (16, 30) is at the same time a housing shell portion (38) of the battery (10).

15. An electromedical implant as set forth in one or more of claims 1 through 13 characterized in that the implant housing (18) comprises two half-shell portions (16, 30) and both half-shell portions (16, 30) of the implant housing (18) at the same time form the housing shell portions (38) of the battery (10) and the circuit (22) and all further functional component parts of the implant are hermetically sealed with respect to an electrolyte of the battery (10).

16. An electromedical implant as set forth in claim 14 or claim 15 characterized in that the half-shell portions (16, 30) of the implant housing (18) are in the form of snap-engagement shell portions.

17. An electromedical implant as set forth in claim 14 or claim 15 characterized in that the housing shell portion (38) of the battery (10) comprises a biocompatible material.

18. An electromedical implant as set forth in claim 17 characterized in that the housing shell portion (38) is of titanium.

19. An electromedical implant as set forth in one of the preceding claims characterized in that the circuit (22) extends over > 80%, in particular > 90%, particularly preferably > 95% of the flat side (10.2) of the battery (10).

20. An electromedical implant as set forth in one of the preceding claims characterized in that the battery (10) and the circuit (22) occupy > 85%, in particular > 90% and particularly preferably > 95% of the overall volume of the housing.